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10/084,197	02/28/2002	Shing Cheung Chow	WEN 161	4908

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EXAMINER
COLON, GERMAN

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/084,197	Applicant(s) CHOW ET AL.
	Examiner German Colón	Art Unit 2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☒ Claim(s) *1* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities:

Claim 1 recites the limitations of "one High Temperature Resistance electrode" and "a Getter", which are capitalized. These terms are not in proper idiomatic of grammatical English.

The Examiner notes the appearance of these terms in other claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the term "i.e." renders the claim indefinite because it is unclear whether the limitations following the term are part of the claimed invention. See MPEP § 2173.05(d).

Referring to claims 2-26, claims 2-26 are rejected over the reasons stated in the rejection of claim 1 because of their dependency status from claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 4, 5, 7, 11 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (APA) in view of Kimura et al. (US 4,303,846).

Regarding claim 1, the APA discloses a flash discharge lamp comprising:

a glass tube; an anode and a cathode, oppositely disposed in at both ends of the glass tube; an electro-conductive member provided on the outer surface of the glass tube; a triggering electrode mounted on said cathode and electrically connected to said electro-conductive member; and xenon gas sealed in said glass tube. The APA fails to disclose the limitation of "al least one high temperature resistant electrode mounted on said cathode and at least one getter electrode mounted on said cathode and/or said anode".

However, in the same field of endeavor, Kimura discloses a sintered electrode for a flash discharge lamp including a cathode comprising a high temperature resistant electrode (from now on HTR electrode) and a getter, and teaches that this electrode provides a discharge tube which requires low initial starting voltage, resulting in operation of the tube at stabilized starting voltages, and reduces blackening providing the tube a long life (see Col. 1, lines 62-68). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the APA lamp with Kimura's electrode in order to provide a discharge tube which

requires low initial starting voltage, resulting in operation of the tube at stabilized starting voltages, and to reduce blackening providing the tube a long life.

Regarding claim 4, APA-Kimura discloses a getter electrode positioned on the cathode side.

Regarding claim 5, APA-Kimura discloses the HTR electrode being made of Ta (see Col. 2, lines 44-47).

Referring to claim 7, APA-Kimura discloses the HTR electrode being made of Nb (see Col. 2, lines 44-47).

Referring to claim 11, APA-Kimura discloses the getter electrode being made of Ti (see Col. 2, lines 48-49).

Referring to claim 13, APA-Kimura discloses the getter electrode being made of Zr (see Col. 2, lines 48-49).

6. Claims 1-5, 11, 13, 15-17, 23 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Chow (US 3,727,089) further in view of Buchta et al. (US 3,968,392).

Regarding claim 1, the APA discloses a flash discharge lamp comprising:

a glass tube; an anode and a cathode, oppositely disposed in at both ends of the glass tube; an electro-conductive member provided on the outer surface of the glass tube; a triggering electrode mounted on said cathode and electrically connected to said electro-conductive member; and xenon gas sealed in said glass tube. The APA fails to disclose the limitation of "at least one getter electrode mounted on said cathode and/or said anode". However, in the same field of

endeavor, Chow discloses a flash discharge lamp comprising a getter on or near one end of the anode or the cathode with the purpose of maintaining stable luminous performance by absorbing gases and other impurities caused by the electric discharge, which blacken the discharge lamp and can sometimes crack the bulb (see Col. 1, lines 14-15, 20-28 and 51-55).

APA-Chow fails to disclose a "HTR electrode mounted on said cathode". However, in the same field of endeavor, Buchta discloses a flash discharge lamp comprising an anode and a cathode provided with a HTR electrode with the purpose of reducing the range of fluctuation of the ignition point in order to reduce the ignition voltage, providing a reliably operating ignition aid, and further provides a support for the cathode and anode (see Col. 1, lines 53-57 and Col. 2, lines 2-5). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Buchta to provide a HTR electrode to the cathode and anode of APA-Chow in order to reduce the range of fluctuation of the ignition point, reducing ignition voltage, providing a reliably operating ignition aid, and further provides a support for the cathode and anode.

Regarding claim 2, APA-Chow-Buchta discloses a HTR electrode affixed on the anode side (see Fig. 1 of '392 in view of APA-Chow).

Regarding claim 3, claim 3 is rejected over the reasons stated in the rejection of claim 2.

Referring to claim 4, Chow discloses the getter positioned on the cathode side (see Col. 2, line 10).

Referring to claim 5, Buchta discloses the HTR electrode being made of Ta (see Col. 2, line 4).

Referring to claim 11, Chow discloses the getter electrode being made of Ti (see Col. 2, line 11).

Regarding claim 13, Chow discloses the getter electrode being made of Zr (see Col. 2, lines 11-12).

Regarding claim 15, 16 and 17, claim 15, 16 and 17 are rejected over the reasons stated in the rejection of claims 2, 4 and 5, respectively.

Referring to claims 23 and 25, claims 23 and 25 are rejected over the reasons stated in the rejection of claims 11 and 13, respectively.

7. Claims 6-10 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA-Chow-Buchta as applied to claims 1, 2, 5 and 17 above, and further in view of Evans et al. (US 5,856,726).

Referring to claim 6, APA-Chow-Buchta discloses a cathode and/or an anode comprising a HTR electrode. Buchta teaches that said electrode could be made of tantalum or some other metal having good thermal conductivity. APA-Chow-Buchta fails to disclose the HTR electrode being made of a Ta alloy.

However, in the same field of endeavor, Evans discloses a discharge lamp comprising electrodes having good thermal conductivity and teaches Ta, Ti, V, Nb and alloys thereof as art recognized equivalents (see Col. 4, lines 29-31). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a Ta alloy, as disclosed by Evans, instead of a Ta, as disclosed by Buchta, since Evans teaches Ta, Ti, V, Nb and alloys thereof as art recognized equivalent materials for electrodes having good thermal conductivity.

Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Referring to claim 7, APA-Chow-Buchta-Evans discloses the HTR electrode being made of Nb or Nb alloy.

Regarding claim 8, claim 8 is rejected over the reasons stated in the rejection of claim 6.

Regarding claim 9, APA-Chow-Buchta-Evans discloses the HTR electrode being made of V or V alloy.

Regarding claims 10, claims 10 is rejected over the reasons stated in the rejection of claim 6.

Referring to claims 18-22, claims 18, 19, 20, 21 and 22 are rejected over the reasons stated in the rejection of claims 6, 7, 8, 9 and 10, respectively.

8. Claims 12, 14, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA-Chow-Buchta as applied to claims 11, 13, 23 and 25 above, and further in view of Rutan et al. (US 5,838,104).

Regarding claim 12, APA-Chow-Buchta discloses a cathode and/or an anode comprising a getter electrode. Chow teaches that said electrode could be made of Ti, Ta or Zr. APA-Chow-Buchta fails to disclose a Ti alloy as a getter. However, Rutan teaches that in the field of discharge lamp construction is common to use a metal getter and discloses Ba, Ta Ti, Zr and their alloys as art recognized equivalents (see Col. 1, lines 64-66 and Col. 2, lines 3-5). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a Ti alloy, as disclosed by Rutan, instead of Ti, as disclosed by Chow, since Rutan teaches

Ba, Ta Ti, Zr and their alloys as art recognized equivalent materials for getter metals. Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

The Examiner notes that APA-Chow-Buchta-Rutan discloses a getter made of Ti-Ba or Zr-Ba alloy.

Referring to claims 14, 24 and 26, claims 14, 24 and 26 are rejected over the reasons stated in the rejection of claim 12 above.

Prior Art or Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Mehrotra et al., in US 5,982,097 discloses an electrode for a discharge lamp comprising a Ta, W or an alloy thereof.

Panico, in US 3,930,176, discloses a discharge lamp comprising a HTR electrode which acts as a buffer for thermal shock waves.

Cosco et al., in US 3,849,690, discloses a cathode comprising a HTR electrode affixed to it.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 703-305-5987. The examiner can normally be reached on Monday thru Friday, from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703-305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

gc
May 16, 2003

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